statesmen. Of the eleven writers of fiction, nine were elected, while, of the ten authors who wrote on serious subjects, only three were chosen. As the judges are men of literary tastes, they were more familiar with the work of the authors than of men in the other classes. The uniformity of the percentages in different years is very marked. This renders more conspicuous the relatively small vote for authors in 1900. If forty votes had elected in 1910, three of the six who were chosen would have been statesmen.

As the total number of votes cast was 8,645, three fourths of them were wasted; 2,050 votes would have given the forty-one men elected fifty votes each.

Edward C. Pickering

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A METHOD FOR IMBEDDING SMALL OBJECTS

It is quite a task to carry minute objects, as protozoa or eggs of sea urchins, etc., through the alcohols and get them safely imbedded in paraffin, without losing most if not all of them on the way. Lefevre[1] described a watch crystal designed by him for the purpose of imbedding small objects. This crystal had a small rectangular-shaped slit in the bottom about 12 x 2 x 3 mm. This could be given a thin coat of glycerine and the objects placed in it by means of a pipette, and then the melted paraffin poured over them. When cold the paraffin can be removed with the objects imbedded in the small rectangular block which is easily trimmed for cutting. Lefevre suggested that the objects might be carried through the dehydration stages in the crystal, by drawing off the liquids with a pipette. This however, as later pointed out by Mayer, would remove the possibility of coating the crystal with glycerine and hence make it nearly impossible to remove the paraffin block when cold. Mayer[2] suggests an improvement by transferring the objects from absolute alcohol into small gelatine capsules. They may be cleared with xylol in the capsule and then melted paraffin added, and the whole thing cooled in water. The water cools the paraffin and also dissolves away the gelatine capsule, leaving the objects imbedded in a neat cylindrical plug. There are some objections, however, to this method. (1) The great danger of losing the objects during the process of transferring them with a pipette from one reagent to another, and (2) the end of the paraffin cylinder at which the eggs lodge is rounded and hence difficult to cut. This latter obstacle was overcome by Metcalf's suggestion[3] of reimbedding the objects in a Lefevre watch glass and hence removing the difficulty of having a round end to the mold. He found this successful with his preparations of *Opalina*. But even still there is great trouble attending the dehydration of these small bodies by transferring them from one watch crystal to another with a pipette or by drawing off the liquids with the pipette and leaving the objects in the dish. To make this task easier I suggest the following method which I have found successful with the eggs of sea urchins and *Cerebratulus lacteus*.

A heavy wooden base is obtained with holes bored in it of a proper size to permit ordinary homeopathic phials to stand upright in them. The size of phial I have found most convenient is about ten centimeters long and three in diameter. These phials are fitted with corks and then filled with the reagents desired in the process of fixation and dehydration. The next step in the preparation is to get some gelatine capsules (5 × 11 mm.) and give them a thin coat of shellac (shellac dissolved in 98 per cent. alcohol). This coat is best applied by immersing the capsules for a minute in a thin solution of the shellac and then standing them up on a flat surface to dry. Care must be taken to see that the capsules are completely immersed in the shellac solution so as to insure the coating of the inside surface. When dry take a fine needle and heat the point red hot and with it pierce a hole in the wall of the capsule about two millimeters from the top and another about three millimeters from the bottom. This is to permit a thorough drainage of the reagents through the capsule. A fine wire can now be fastened to the rim of

[1] *The Jour. of Applied Microscopy*, Vol. V., pp. 2080–2081.

[2] *Zeitschr. f. wiss. Mikrosk. u. mikr. Technik*, Bd. 24.

[3] *Arch. f. Protistenkunde*, Vol. 13, p. 195.

the capsule and attached at its other end to the under surface of a cork fitting the phials containing the reagents. The wire should be of such a length as to just permit the flow of the reagent through the two holes in the capsule when the cork is tightly fitted into the phial. To place the objects to be imbedded in their shellac-gelatine container I take a glass rod drawn out to a desirably fine point and dip it into a celloidin solution of gelatinous consistency (12 per cent. celloidin in 80 per cent. alcohol). A little of the celloidin will cling to the point of the rod, which is then allowed to come in contact with the stock of material to be dehydrated, in my case sea urchin eggs. A number of these eggs will cling to the sticky mass, which can be easily washed into the bottom of the prepared capsule. Then it is a simple matter to run the eggs through the reagents. One only has to transfer them by taking the cork from one phial and carrying it over to the next. They may first be washed in water and weak alcohol as the outside coating of shellac is insoluble in water and weak alcohol and hence prevents the dissolving of the gelatine. By the time 95 per cent. alcohol has been reached the shellac has dissolved away, but in this medium the gelatine is insoluble and so the objects are safely retained. They can be cleared in xylol and left in melted paraffin to permit thorough infiltration. When ready for the final imbedding one can easily hold the capsule out of the phial by means of the cork to which it is attached, and slowly drop melted paraffin into the mouth of the capsule with a pipette, all the time blowing on the capsule to hasten cooling. The paraffin will cool quickly and plug up the two drain holes and form a solid cylinder. Then one may detach the capsule from the wire and place it in water where the gelatine soon dissolves, leaving a solid form of paraffin with the eggs imbedded in the end of it. To assure being able to see the eggs one may place the capsule during the dehydration process for a few minutes in borax carmine, which will stain the objects red and thus enable one to see them through the rest of the process. After being sectioned the carmine may be decolorized with acid alcohol.

This method removes the danger of losing the objects when transferring them from the various solutions with a pipette. The drop of celloidin assures their being held in a compact mass and in most cases raises the bodies far enough from the floor of the capsule so that the rounded end may be sliced off without cutting away the objects and thus give a flat surface to section from. To be absolutely sure of this one may prepare his capsules with flat bottoms before imbedding. This is done by cutting off the round end and attaching a flat sheet over the bottom with liquefied gelatine and cementing it with shellac. Or again after the objects are imbedded in the round end of the capsule they may be sliced out and reimbedded in a Lefevre watch glass as suggested by Metcalf.[4]

This method will, I am sure, prove useful to any one having much imbedding to do, of minute objects. It has the advantages of being extremely simple, rapid and reliable.

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SOME REASONS FOR SAVING THE GENUS

As there seems to be something of a lull at present in the vexatious controversies over zoological and botanical nomenclature, I fear that I run the risk of being branded as a wanton mischiefmaker if I seek to reopen the subject in these columns. However, no one can say that the evils complained of are likely to diminish much in the near future. And furthermore, it has always seemed to me that one of the most flagrant of these evils has scarcely been *complained of* at all, at least in the public discussions regarding nomenclature. Complaint has been made, bitterly enough at times, of the constant changing of specific names, resulting from a rigid enforcement of the law of priority. In reply, it is contended, and with some plausibility, that such changes will cease automatically when the antiquarian has finally accomplished his task.

But there is another perennial source of

[4] *Loc. cit.*